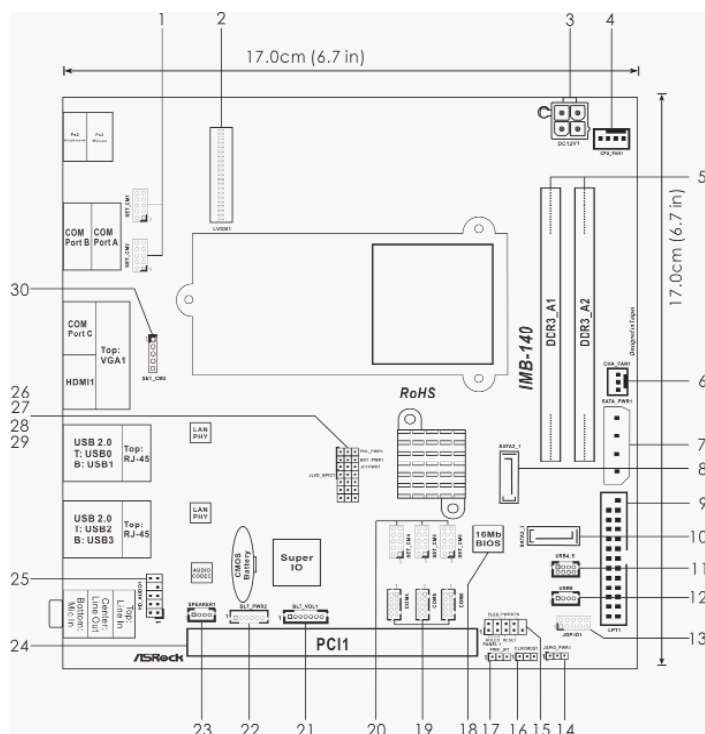


# Motherboard Layout

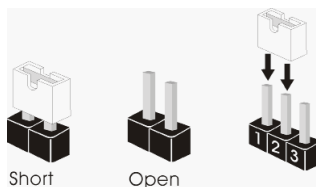


- |    |   |    |  |
|----|---|----|--|
| 1  | SET COM Ports 1,2 (SET_CM1,2)               | 18 | SPI Flash Memory (16Mb)                                |
| 2  | LVDS Con (LVDS1)                            | 19 | COM Ports 4,5,6 (COM4,5,6)                             |
| 3  | 4-Pin DC PWR (DC12V1)                       | 20 | SET COM Ports 4,5,6 (SET_CM4,5,6)                      |
| 4  | CPU Fan Connector (CPU_FAN1)                | 21 | Panel Brightness and Speaker Volume Control (BLT_VOL1) |
| 5  | 2 x DDR3 DIMM Slots                         | 22 | Panel Backlight Inverter connector (BLT_PWR2)          |
| 6  | Chassis Fan Connector (CHA_FAN1)            | 23 | Speaker Connector (SPEAKER1)                           |
| 7  | Output Power (SATA_PWR1)                    | 24 | PCI1   |
| 8  | SATA2 Connector (SATA2_1, Blue)             | 25 | Front Panel Audio Header (HD_AUDIO1)                   |
| 9  | Printer Port Header (LPT1)                  | 26 | Panel VDD PWR Setting (PNL_PWR1)                       |
| 10 | SATA2 Connector (SATA2_2, Blue)             | 27 | Panel Backlight PWR Setting (BKT_PWR1)                 |
| 11 | USB 2.0 Ports 4,5 (USB4,5)                  | 28 | Bottom Side CF Card PWR Setting (JCFPW1)               |
| 12 | USB 2.0 Port 6 (USB6)                       | 29 | Panel Resolution Selection (JLVD_GPIO1)                |
| 13 | Digital I/O Header (JGPIO1)                 | 30 | SET COM Port 3 (SET_CM3)                               |
| 14 | Digital I/O Header PWR Setting (JGPIO_PWR1) |    |  |
| 15 | System Panel Control Header (PANEL1)        |    |  |
| 16 | Clear CMOS Header (CLRCMOS1)                |    |  |
| 17 | PWR-On mode Setting (PWR_JP1)               |    |  |

---

## Onboard Headers, Connectors and Jumpers

The illustration shows how jumpers are setup. When the jumper cap is placed on pins, the jumper is "Short". If no jumper cap is placed on pins, the jumper is "Open". The illustration shows a 3-pin jumper whose pin1 and pin2 are "Short" when jumper cap is placed on these 2 pins.



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### Clear CMOS Jumper

(CLRCMOS1)

(see p.1, No. 16)



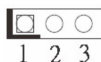
Note: CLRCMOS1 allows you to clear the data in CMOS. To clear and reset the system parameters to default setup, please turn off the computer and unplug the power cord from the power supply. After waiting for 15 seconds, use a jumper cap to short pin2 and pin3 on CLRCMOS1 for 5 seconds. However, please do not clear the CMOS right after you update the BIOS. If you need to clear the CMOS when you just finish updating the BIOS, you must boot up the system first, and then shut it down before you do the clear-CMOS action. Please be noted that the password, date, time, user default profile and MAC address will be cleared only if the CMOS battery is removed.

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### Digital I/O Header PWR Setting

(3-pin JGPIO\_PWR1)

(see p.1 No. 14)



1-2: +12V.

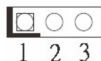
2-3: +5V.

---

### PWR-On Mode Setting

(3-pin PWR\_JP1)

(see p.1 No. 17)



1-2: AT Mode.

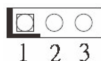
2-3: ATX Mode.

---

### Panel VDD PWR Setting

(3-pin PNL\_PWR1)

(see p.1 No. 26)



1-2: +3.3V.

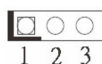
2-3: +5V.

---

### Panel BackLight PWR Setting

(3-pin BKT\_PWR1)

(see p.1 No. 27)



1-2: +5V.

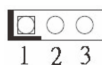
2-3: +12V.

---

### Bottom Side CF Card PWR Setting

(3-pin JCFPWR1)

(see p.1 No. 28)



1-2: +3.3V.

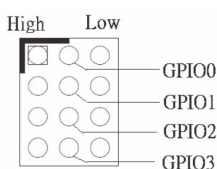
2-3: +5V.

---

### Panel Resolution Selection

(12-pin JLVD\_GPIO1)

(see p.1 No. 29)



Reserved.

Default set by BIOS.

## 2.8 Onboard Headers and Connectors

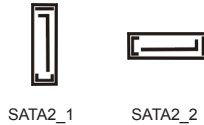


Onboard headers and connectors are NOT jumpers. Do NOT place jumper caps over these headers and connectors. Placing jumper caps over the headers and connectors will cause permanent damage of the motherboard!

### SATA2 Connectors

(SATA2\_1: see p.1, No. 8)

(SATA2\_2: see p.1, No. 10)

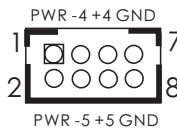


These two Serial ATA2 (SATA2) connectors support SATA data cables for internal storage devices. The current SATA2 interface allows up to 3.0 Gb/s data transfer rate.

### USB 2.0 Ports

(4-pin USB4,5)

(see p.1 No. 11)



Besides four default USB 2.0 ports on the I/O panel, there are three USB 2.0 ports on this motherboard.

(4-pin USB6)

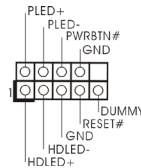
(see p.1 No. 12)



### System Panel Header

(9-pin PANEL1)

(see p.1 No. 15)



This header accommodates several system front panel functions.



Connect the power switch, reset switch and system status indicator on the chassis to this header according to the pin assignments below. Note the positive and negative pins before connecting the cables.

#### **PWRBTN (Power Switch):**

Connect to the power switch on the chassis front panel. You may configure the way to turn off your system using the power switch.

**RESET (Reset Switch):**

Connect to the reset switch on the chassis front panel. Press the reset switch to restart the computer if the computer freezes and fails to perform a normal restart.

**PLED (System Power LED):**

Connect to the power status indicator on the chassis front panel. The LED is on when the system is operating. The LED keeps blinking when the system is in S1 sleep state. The LED is off when the system is in S3/S4 sleep state or powered off (S5).

**HDLED (Hard Drive Activity LED):**

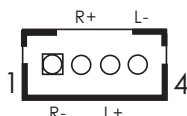
Connect to the hard drive activity LED on the chassis front panel. The LED is on when the hard drive is reading or writing data.

The front panel design may differ by chassis. A front panel module mainly consists of power switch, reset switch, power LED, hard drive activity LED, speaker and etc. When connecting your chassis front panel module to this header, make sure the wire assignments and the pin assignments are matched correctly.

**Speaker Connector**

(4-pin SPEAKER 1)

(see p.1 No. 23)



1: Speaker R-

2: Speaker R+

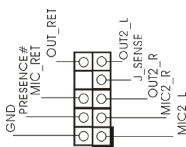
3: Speaker L+

4: Speaker L-

**Front Panel Audio Header**

(9-pin HD\_AUDIO1)

(see p.1 No. 25)



This is an interface for front panel audio cable that allows convenient connection and control of audio devices.



1. High Definition Audio supports Jack Sensing, but the panel wire on the chassis must support HDA to function correctly. Please follow the instruction in our manual and chassis manual to install your system.
2. If you use AC'97 audio panel, please install it to the front panel audio header as below:
  - A. Connect Mic\_IN (MIC) to MIC2\_L.
  - B. Connect Audio\_R (RIN) to OUT2\_R and Audio\_L (LIN) to OUT2\_L.
  - C. Connect Ground (GND) to Ground (GND).
  - D. MIC\_RET and OUT\_RET are for HD audio panel only. You don't need to connect them for AC'97 audio panel.

E. To activate the front mic.

For Windows® XP / XP 64-bit OS:

Select "Mixer". Select "Recorder". Then click "FrontMic".

For Windows® 7 / 7 64-bit / Vista™ / Vista™ 64-bit OS:

Go to the "FrontMic" Tab in the Realtek Control panel. Adjust "Recording Volume".

## Chassis Fan Connector

(3-pin CHA\_FAN1)

(see p.1 No. 6)

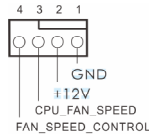


Please connect the fan cable to the fan connector and match the black wire to the ground pin.

## CPU Fan Connector

(4-pin CPU\_FAN1)

(see p.1 No. 4)



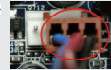
Please connect the CPU fan cable to the connector and match the black wire to the ground pin.



Though this motherboard provides 4-Pin CPU fan (Quiet Fan) support, the 3-Pin CPU fan still can work successfully even without the fan speed control function. If you plan to connect the 3-Pin CPU fan to the CPU fan connector on this motherboard, please connect it to Pin 1-3.

Pin 1-3 Connected

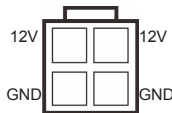
3-Pin Fan Installation



## DC 12V Power Connector

(4-pin DC12V1)

(see p.1 No. 3)

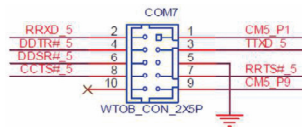
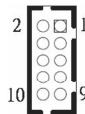


Please connect a DC 12V power supply to this connector.

## COM port 4,5,6

(10-pin COM4,5,6)

(see p.1 No. 19)



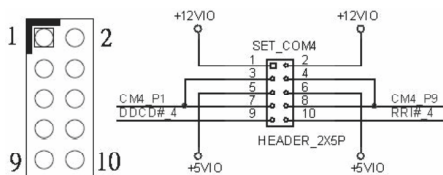
## SET COM Ports

(10-pin SET\_CM1,2)

(see p.1 No. 1)

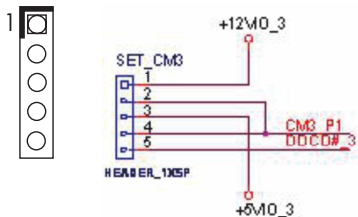
(10-pin SET\_CM4,5,6)

(see p.1 No. 20)



(5-pin SET\_CM3)

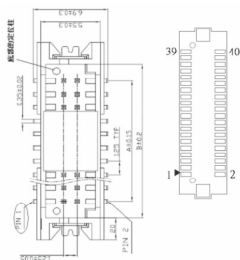
(see p.1 No. 30)



## LVDS Con

(40-pin LVDS1)

(see p.1 No. 2)



LVDS Con Pin Define

Pin #	Signal Name	Pin #	Signal Name
1	VDD PWR	2	VDD PWR
3	EDID PWR (3V)	4	EDID_CLK
5	EDID_DAT	6	RXINO0-
7	RXINO0+	8	GND
9	RXINO1-	10	RXINO1+
11	GND	12	RXINO2-
13	RXINO2+	14	GND
15	RXINO3-	16	RXINO3+
17	GND	18	RXOCLKIN-
19	RXOCLKIN+	20	GND
21	RXINE0-	22	RXINE0+
23	GND	24	RXINE1-
25	RXINE1+	26	GND
27	RXINE2-	28	RXINE2+
29	GND	30	RXINE3-
31	RXINE3+	32	GND
33	RXECLKIN-	34	RXECLKIN+
35	GND	36	BackLight EN
37	BackLight PWM	38	BackLight PWR
39	BackLight PWR	40	BackLight PWR

## Output Power

(4-pin SATA\_PWR1)

(see p.1 No. 7)



1: +5V

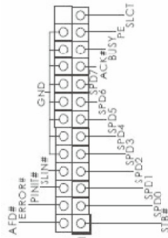
2, 3: GND

4: +12V

Printer Port Header

(25-pin LPT1)

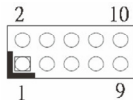
(see p.1 No. 9)



Digital I/O Header

(10-pin JGPIO1)

(see p.1 No. 13)

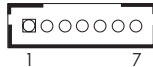


PIN	Signal Name	PIN	Signal Name
1	Digital Output 0	2	Digital Input 0
3	Digital Output 1	4	Digital Input 1
5	Digital Output 2	6	Digital Input 2
7	Digital Output 3	8	Digital Input 3
9	PWR	10	GND

Panel Brightness and  
Speaker Volume Control

(7-pin BLT\_VOL1)

(see p.1 No. 21)

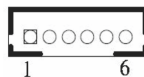


- 1: Volume\_UP
- 2: Volume\_DOWN
- 3: PANEL PWR Down
- 4: Panel BackLight UP
- 5: Panel BackLight Down
- 6: GND
- 7: GND

Panel BackLight Inverter  
connector

(6-pin BLT\_PWR2)

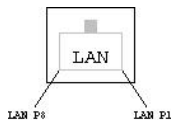
(see p.1 No. 22)



- 1,2: Panel Backlight Power
- 3: Panel Backlight Enable
- 4: Panel Backlight Control
- 5,6: GND

RJ-45 COM Port C

(8-pin COM Port C)



- 1: DCD#
- 2: RXD
- 3: TXD
- 4: DTR#
- 5: GND
- 6: DSR#
- 7: RTS#
- 8: CTS#